

**ABSTRACT**

Hole-forming apparatus (1900) for forming a hole in a blood vessel, comprising a penetration shaft (1908), having a tip (1904) adapted to be inserted through a wall of a blood vessel; a tissue holder (1986), configured to hold a portion of said wall, said holder (1986) being activated to perform said holding separately from an insertion of said penetration shaft (1908) through said wall; and a cutting surface (1910) adapted to cut through the wall.